

CLIPPEDIMAGE= JP404135667A

PAT-NO: JP404135667A

DOCUMENT-IDENTIFIER: JP 04135667 A

TITLE: DEVICE AND METHOD FOR APPLYING LIQUID CHEMICAL

PUBN-DATE: May 11, 1992

INVENTOR-INFORMATION:

NAME

KOBAYASHI, TORU

ASSIGNEE-INFORMATION:

NAME

COUNTRY

FUJITSU LTD

N/A

APPL-NO: JP02260087

APPL-DATE: September 27, 1990

INT-CL (IPC): B05C011/08;B05D001/40 ;G03F007/16 ;H01L021/027

US-CL-CURRENT: 118/52

ABSTRACT:

PURPOSE: To allow the application of a high-viscosity liquid chemical within the recessed parts of fine steps on the surface of a material to be coated by providing a DC power source for impressing a DC voltage to the electrode in a chuck and providing a DC power source for impressing a DC voltage to the electrode in a nozzle.

CONSTITUTION: The chuck 2 to be rotated by a motor 3 is provided in a cup 1 of the liquid chemical applying device and the nozzle 4 which drops the liquid chemical to be applied on the material to be coated, such as wafer 8, imposed on the surface of this chuck 2. The application of the liquid chemical on the wafer by using this liquid chemical applying device is executed by first imposing the wafer 8 to be coated with the liquid chemical on the chuck 2, fixing the wafer by static electricity, dropping a liquid chemical drop 7 to

the center of the wafer 8, rotating the chuck 2, regulating the rotating speed to 1,000 revolutions per minute to uniformly spin-wat the liquid chemical on the surface of the wafer 8, and splashing the excess liquid chemical into the cup 1. The concentration of the ions in the liquid chemical to the circumference of the electrode 4a is prevented in this way and the clogging of the nozzle 4 is obviated and, therefore, the uniform application of the liquid chemical on the surface of the wafer is possible.

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DERWENT-ACC-NO: 1992-205091  
DERWENT-WEEK: 199225  
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TITLE: Device for applying chemical liq. to wafer - provides electrode in  
chuck with DC electric power source, and electrode in nozzle with DC source  
NoAbstract

PATENT-ASSIGNEE: FUJITSU LTD[FUIT]

PRIORITY-DATA: 1990JP-0260087 (September 27, 1990)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 04135667 A	May 11, 1992	N/A	005	B05C 011/08

APPLICATION-DATA:

PUB-NO	APPL-DESCRIPTOR	APPL-NO	APPL-DATE
JP 04135667A	N/A	1990JP-0260087	September 27, 1990

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H01L021/30

ABSTRACTED-PUB-NO:  
EQUIVALENT-ABSTRACTS:

TITLE-TERMS:

DEVICE APPLY CHEMICAL LIQUID WAFER ELECTRODE CHUCK DC  
ELECTRIC POWER SOURCE  
ELECTRODE NOZZLE DC SOURCE NOABSTRACT

DERWENT-CLASS: D15 P42 P84 U11

CPI-CODES: D04-A01M;

EPI-CODES: U11-C04A1B;

SECONDARY-ACC-NO:

CPI Secondary Accession Numbers: C1992-093295  
Non-CPI Secondary Accession Numbers: N1992-155189

ては、このシャッタ11cを閉じることによりカップ11内の圧力を水柱数百mmにすることができるので、より短時間に確実に薬液をウエーハ8に塗布することが可能となる。

〔発明の効果〕

以上の説明から明らかなように本発明によれば、極めて簡単な構造の改良により、ウエーハに良好な状態で薬液の塗布を行うことが可能となる利点があり、著しい経済的及び、信頼性向上の効果が期待できる薬液塗布装置及び薬液塗布方法の提供が可能となる。

4. 図面の簡単な説明

第1図は本発明による第1の実施例の薬液塗布装置の概略構造を示す図、

第2図は本発明による第2の実施例の薬液塗布装置の概略構造を示す図、

第3図は従来の薬液塗布装置の概略構造を示す図、

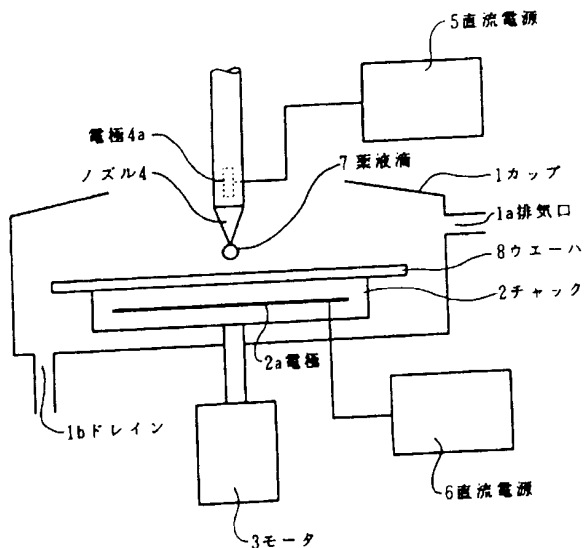
第4図は従来の薬液塗布方法の問題点を示す図、である。

図において、

- |              |             |
|--------------|-------------|
| 1,11はカップ、    | 1a,11aは排気口、 |
| 1b,11bはドレイン、 | 11cはシャッタ、   |
| 2,12はチャック、   | 2a,12aは電極、  |
| 3,13はモータ、    | 4,14はノズル、   |
| 4a,14aは電極、   | 5,15は直流電源、  |
| 6,16は直流電源、   | 7,17は薬液滴、   |
| 8はウエーハ、      | 8aは段差、      |
| 9はレジスト膜、     |             |

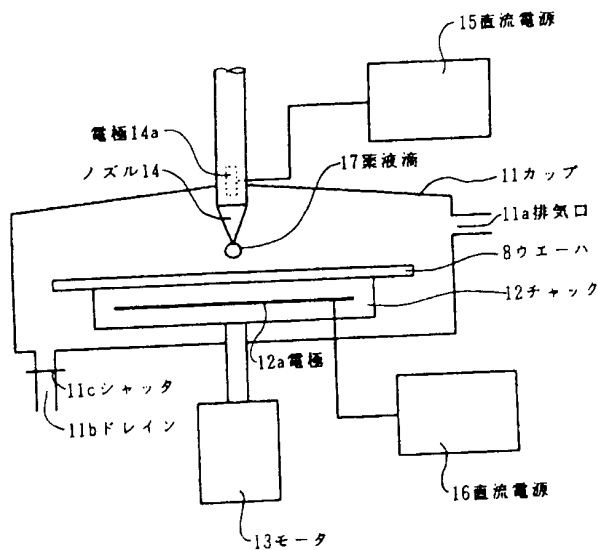
を示す。

代理人 弁理士 井 桁 貞 一



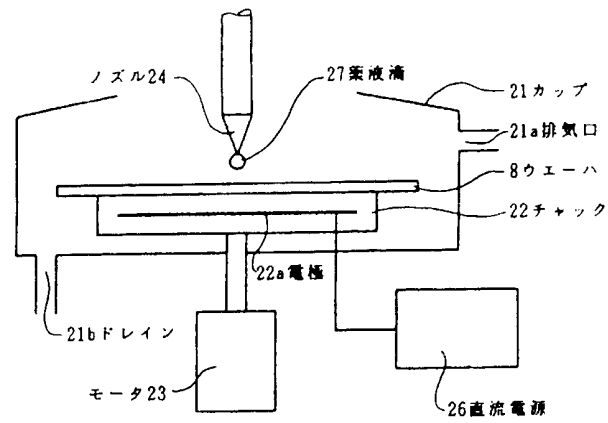
本発明による第1の実施例の薬液塗布装置の概略構造を示す図

第 1 図



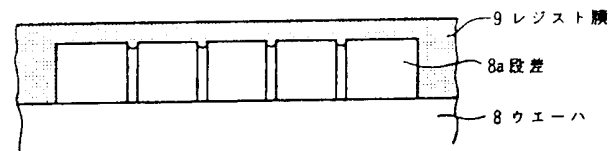
本発明による第2の実施例の薬液塗布装置の概略構造を示す図

第 2 図



従来の薬液塗布装置の概略構造を示す図、

第 3 図



従来の薬液塗布方法の問題点を示す図

第 4 図